

MODIFICATION INSTRUCTIONS

for the

***KODAK X-Omatic* MULTILOADER 700**

Service Code 3053

MODIFICATION No. 24

Type 1 Required

PURPOSE:

To install SOFTWARE VERSION 4.2 into the ML700

IMPORTANT : Use qualified service personnel to install this modification !

SERIAL NUMBERS : 50Hz all units with SN < 2247
: 60Hz all units with SN < 6183

INSTALLATION TIME : Approx. 0.5 hour

PARTS REQUIREMENTS : MOD KIT #24 see parts list inside

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PARTS LIST

PART NUMBER	DESCRIPTION	QTY
9192105	MOD KIT No 24 Version "STANDARD" includes:	
MA 3053-24	MODIFICATION INSTRUCTIONS	1
9193716	U33 (PCB A0)	1
9193726	U34 (PCB A0)	1
9281100	PCB A15 (Piggy back PCB for U35 PCB A0)	1
9193776	U35 (PCB A0) English, German, Italian, French	1

PART NUMBER	DESCRIPTION	QTY
9192115	MOD KIT No 24 Version "US" includes:	
MA 3053-24	MODIFICATION INSTRUCTIONS	1
9193716	U33 (PCB A0)	1
9193726	U34 (PCB A0)	1
9281100	PCB A15 (Piggy back PCB for U35 PCB A0)	1
9193786	U35 (PCB A0) English, French, Spanish, German	1

PART NUMBER	DESCRIPTION	QTY
9192125	MOD KIT No 24 Version "A" includes:	
MA 3053-24	MODIFICATION INSTRUCTIONS	1
9193716	U33 (PCB A0)	1
9193726	U34 (PCB A0)	1
9281100	PCB A15 (Piggy back PCB for U35 PCB A0)	1
9193796	U35 (PCB A0) Swedish, Norwegian, Finish, Danish	1

PART NUMBER	DESCRIPTION	QTY
9192135	MOD KIT No 24 Version "B" includes:	
MA 3053-24	MODIFICATION INSTRUCTIONS	1
9193716	U33 (PCB A0)	1
9193726	U34 (PCB A0)	1
9281100	PCB A15 (Piggy back PCB for U35 PCB A0)	1
9193806	U35 (PCB A0) English, Dutch, Spanish, French	1

INTRODUCTION

The prime reason for the new SOFTWARE VERSION 4.2 is the availability of the SIDE-BY-SIDE SYSTEM (SBS). Software 3.2 was not able to communicate with the SBS. However not only SBS FUNCTIONS are implemented, several other improvements have been made.

NOTE

The software on PCB A2 (SLAVE PROCESSOR) is not changed. Only the software for PCB A0 (MASTER PROCESSOR) is changed!

The following software changes are made :

1. PARAMETER TUNNELFLAG

0 = NO TUNNEL (Use this setting in the CES SERVICE MODE only)

1 = CONVENTIONAL TUNNEL

2 = SBS

For installations with SBS always set this parameter to 2.

In this case RELAY PROCESSOR START K1 on PCB A4 (ML700) is energised as soon as a CASSETTE is detected by the INDUCTIVE SENSORS. It is switched off as soon as the FILM is out of the CASSETTE, or after the ML700 detected that there is no FILM in the CASSETTE. In addition K1 is energised for $100 \pm 35\text{ms}$ when BUTTON 4 (open the MAGAZINE DOOR) is pressed. This pulse is used to block the DFT (DARK ROOM FEED TRAY). A pulse of $200 \pm 35\text{ ms}$ is generated, if the MAGAZINE CHAMBER DOOR is closed or if SERIAL UNLOAD is aborted prior to the infeed of the CASSETTE. This long pulse enables the DFT. After a normal cycle the DFT is always enabled. The DFT will be blocked also if the ML700 TOP COVER is opened or if a message tells the operator to open the top cover.

The input "TUNNEL SENSOR FRONT" (ML700) is used to generate the message "DFT IN USE". This is checked in the ML700 STANDBY MODE.

The input "TUNNEL SENSOR REAR" indicates if the SBS is able to accept the next FILM. This is checked prior to pick up of the CASSETTE FILM.

2. CONVEYER ROLLER (not applicable for the SBS)

If the TUNNEL FLAG is 0, the ROLLERS are running for $1.5 + 10\text{ sec.}$ after the FILM TRAILING EDGE was detected by SENSOR FOC.

3. COUNT ERROR in STATISTIC for 18x24 removed.

4. TRANSPORT BELT is running during pick up of the CASSETTE FILM.

This ensures that the CASSETTE is fully at the END STOP.

5. CASSETTE SIZE DETECTION for 24 x 30 and 8 x 10 improved.

If CASSETTE LENGTH 85 or 86 is detected, SWITCH S2 (CASSETTE WIDTH 0) decides which CASSETTE is fed in. If the SENSOR WIRE of SWITCH S2/CW0 is not bent correctly a X-OMAT CASSETTE 24x30 cm instead of a VIDEO FILM HOLDER 8x10 inch may be detected. To avoid problems see step 15 in the chapter INSTALLATION.

6. The message EXPOSED FILMS USED is changed to FILMS USED.

7. SOFTWARE FILTER for PRINTER.

A software filter ensures that the printer cannot go to large characters.

8. SOFTWARE BUG in version 4.1

If the TUNNEL FLAG was set to 0 and LOAD ONLY was selected, MOTOR M5 did not stop in case no film was picked up from the CASSETTE. If under these circumstances Key 4 (open door) is pressed, the message "PLEASE WAIT" is displayed. The message could only be eliminated by a RESET or power off/on.

Both problems are eliminated with software version 4.2.

9. SERVICE SOFTWARE SCREEN 1 and 2

When entering the SERVICE MODE (FDAB day, day) the ELAPSE TIMES and ERROR FLAGS are displayed on SCREEN 1 and 2. In line 7 position M the status of POWER FAIL is shown. A 0 will be always displayed because this FLAG is not used. The POWER FAIL DETECTION however is still used and working as before.

10. FILM DETECTION

After unloading the CASSETTE it is checked once more with the FILM PRESENCE DETECTOR BOTTOM if there is a FILM on the bottom screen of the CASSETTE. This is done prior to loading the new FILM. If there is a FILM, the CASSETTE is transported out and the message PLEASE INSERT CASSETTE AGAIN is displayed.

11. LANGUAGE EPROMS

The software version 4.1 is installed by the factory as modification 23. For modification 23 the existing type of language EPROM is used. However in the near future this type of EPROM will no longer be available. Modification 24 uses already a "modern" type of EPROM. If the language EPROM of modification 23 fails, order the one from modification 24 plus PCB A15 PN 9281100. PCB A15 is needed because the modern EPROM has more address lines than the old one.

PREPARATION

1. Switch on the ML700 to record the PARAMETER SETTING.
2. Select the SERVICE MODE via the SERVICE KEYPAD and record the actual values of the PARAMETERS:

Key in FDAB day (always 2 digits)

Key in 9

Key in 9

Key in 2 to select CHANGE PARAMETERS from the MAIN MENU

Key in 8 to skip the SCAN RUN SCREEN

Record the actual values of PARAMETERS:

TILT POSITION

ADDITIONAL STEPS

CONTINUOUS LOOP

INCH FLAG

LOWER POCKET

PROCESSOR TIME

FILM PRESENT DETECTOR

Key in 8 to switch to the second PARAMETER SCREEN

Record the actual values of PARAMETERS:

VACUUM OFF TIME

STEP BY STEP MODE

DOUBLE SHEET

TUNNEL FLAG

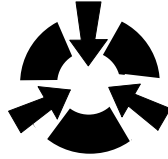
PROCESSOR FLAG

POCKET DELAY

ENABLE OPERATION

Key in 8 two times to exit the SERVICE MODE

INSTALLATION



NOTE

This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

1. Switch off the ML700.
2. Pull out the ML700 DRAWER to get access to PCB A0.
3. Take out U33, U34 and U35 from PCB A0.

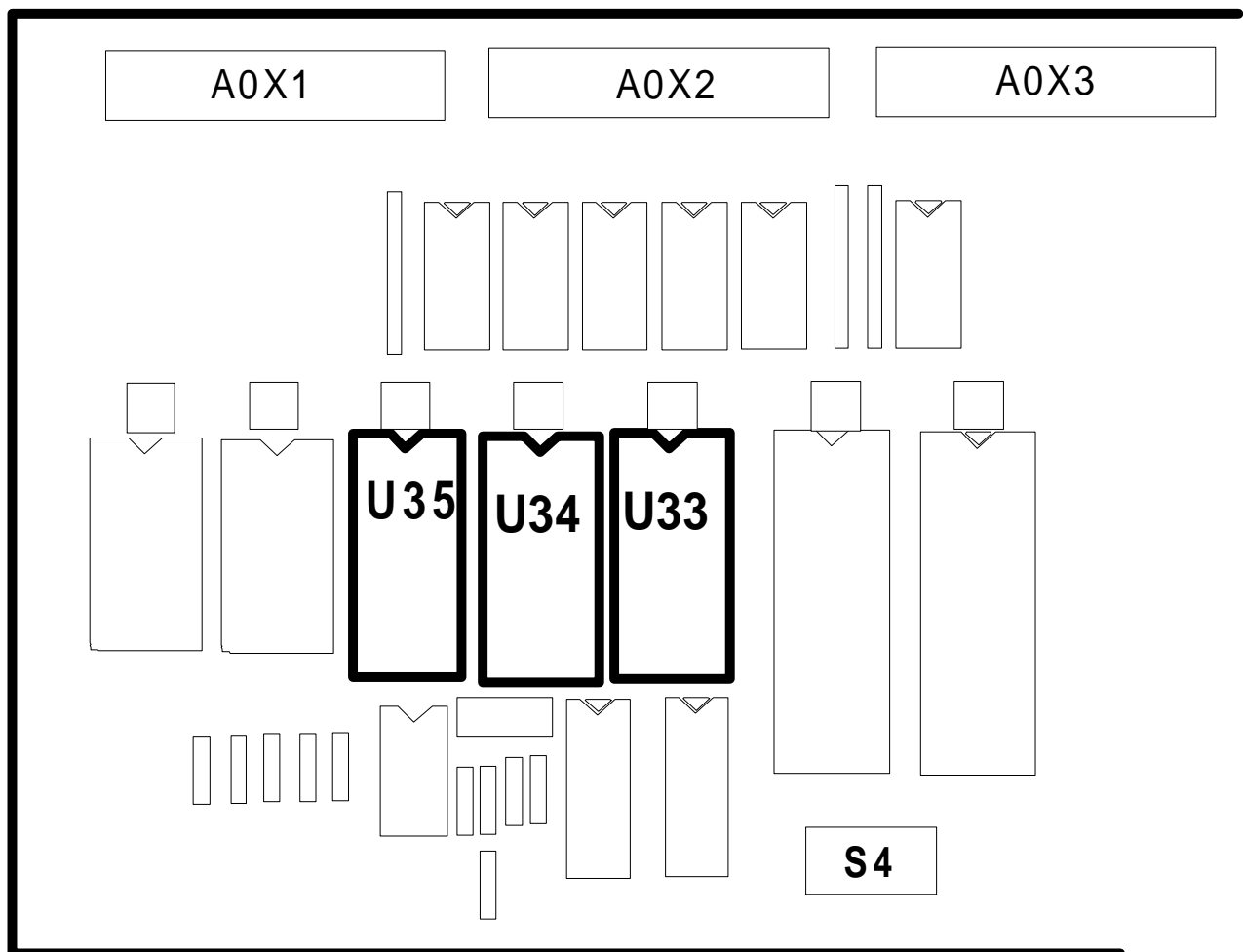


figure 1

4. Insert U33 and U34 from the Modification Kit into the empty SOCKETS U33 and U34 on PCB A0.

NOTE

Ensure that U33 and U34 are inserted with the notch up as shown in figure 1. Ensure that all IC Pins are seated correctly into the sockets.

5. Insert U35 from the Modification Kit into PCB A15 from the Modification Kit.

NOTE

Ensure that U35 is inserted with the notch up as shown in figures 1 and 3. Ensure that all IC Pins are seated correctly into the socket.

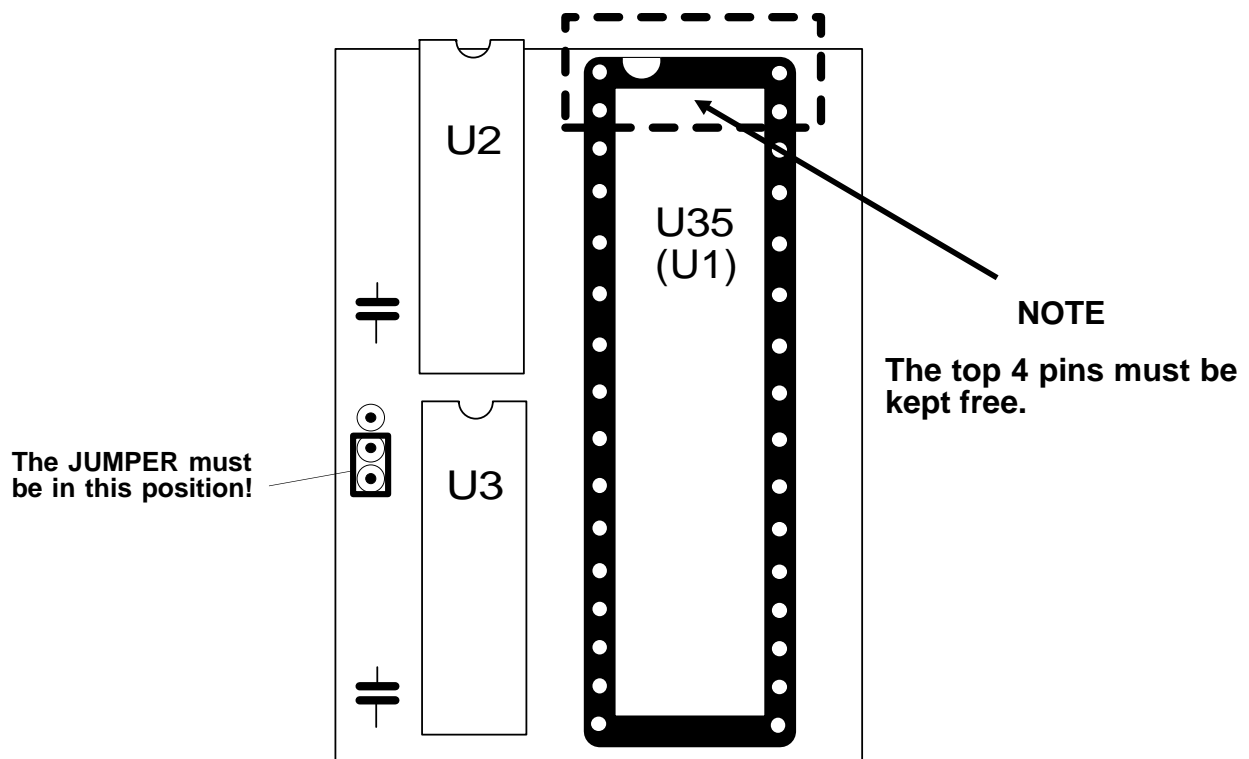


figure 2

5. Insert PCB A15 into SOCKET U35 of PCB A0. The orientation of PCB A15 must be the same as U33 / U34. See figure 3 on the next page.

PARAMETER SETTING AND DATA

1. Move the SERVICE SWITCH S4 on PCB A0 to the right.

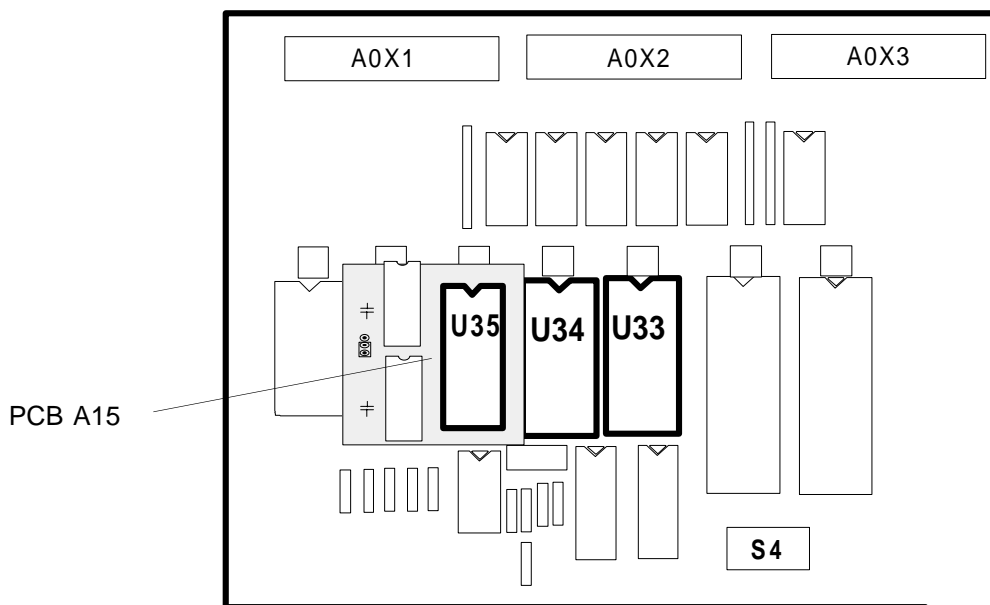


figure 3

2. Switch on the ML700.

NOTE

The top two lines on the DISPLAY show illuminated rectangles and the green READY LIGHT is on.

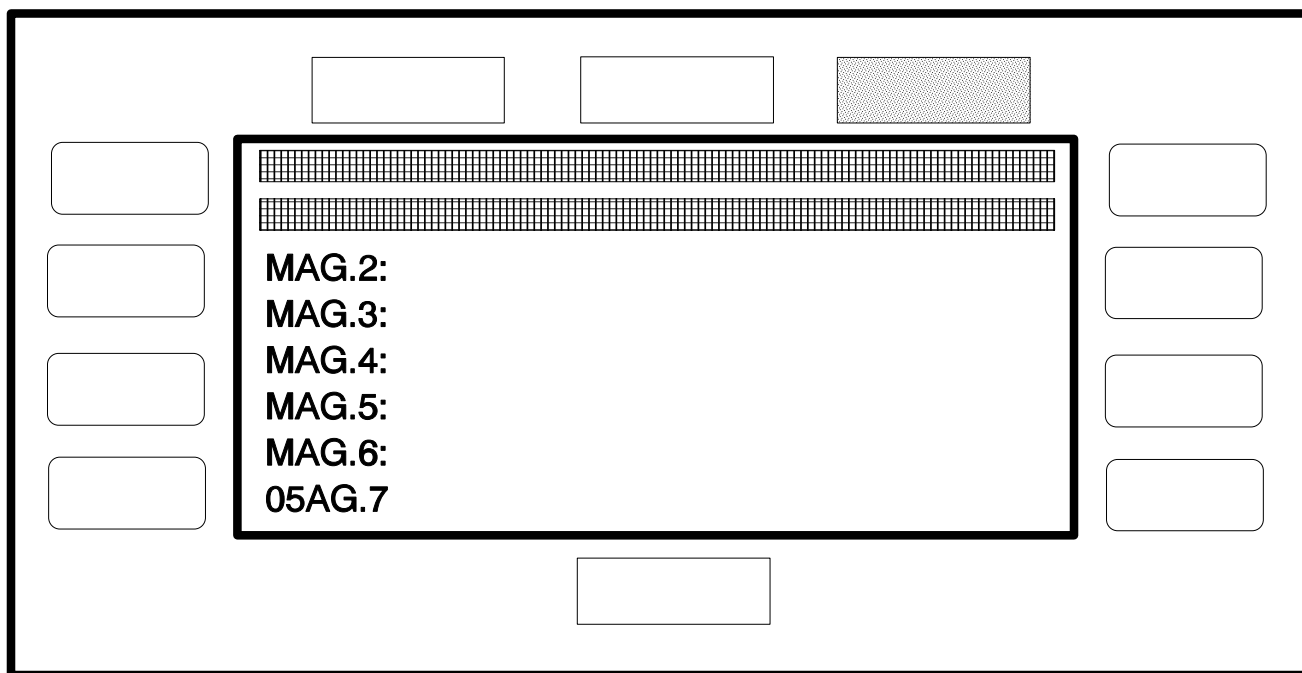


figure 4

3. Select the SERVICE MODE via the SERVICE KEYPAD:

Key in FDAB and 2 random figures (no valid date is necessary because the SERVICE SWITCH S4 on PCB A0 is moved to the right).

Key in 9

Key in 9

4. Change the date and the time.

Select CHANGE TIME from the MAIN MENU (press 1)

Press the SET TIMER SWITCH (S2) on PCB A0 and keep it pressed.

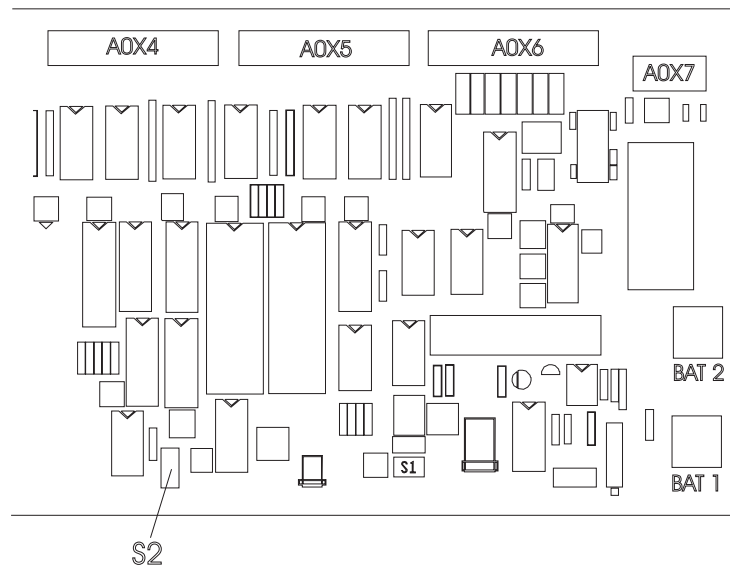


figure 5

NOTE

The values entered now are examples for MAY 24, 1995, time 8.15

Key in 1. The YEAR LINE will show 0000

Key in 1995

Key in 2. The MONTH LINE will show 00

Key in 05

Key in 3. The DAY DOW LINE will show 00 0

Key in 2 4 3

**(DOW Monday = 1 Tuesday = 2 Wednesday = 3 Thursday = 4
Friday = 5 Saturday = 6 Sunday = 7)**

Key in 4. The HOUR LINE will show 00.

Key in 08

Key in 5. The MINUTE LINE will show 00

Key in 15

Key in 7 to start the clock

Release SWITCH S2 on PCB A0

Key in 8 to go back to the MAIN MENU.

5. Key in 2 to select the option CHANGE PARAMETERS.

6. Key in 2 to start the FILM POCKET SCAN RUN.

The diagram shows a control panel with a central display area. On the left side of the panel, there are four rectangular buttons stacked vertically. On the right side, there are five rectangular buttons stacked vertically. At the top of the panel, there are three rectangular buttons. The central display area contains the following text:

2 NEW

245

4

8 GO ON

MAGAZINE	LEVEL	1	1009
MAGAZINE	LEVEL	2	1637
MAGAZINE	LEVEL	3	2240
MAGAZINE	LEVEL	4	2859
MAGAZINE	LEVEL	5	3467
MAGAZINE	LEVEL	6	4077
MAGAZINE	LEVEL	7	4695
SYNCHRON	LEVEL		2803

Arrows point from the text below to specific elements in the diagram: one from 'This figure must be below 300.' to the number '245', one from 'This figure should be below 8' to the number '4', and one from 'These values are examples. They differ from unit to unit.' to the list of magazine levels.

This figure must be below 300.

This figure should be below 8

These values are examples. They differ from unit to unit.

figure 6

7. Key in 8 to select the PARAMETER SCREENS.

8. Key in the PARAMETERS recorded earlier in section PREPARATION.

9. Key in 8 to come back to the main Menu.

10. Clear MEMORY 1...5

Key in 3 to select CLEAR STATISTICS

Key in 2000 to clear MEMORY 1

Key in 2000 to clear MEMORY 2

Key in 2000 to clear MEMORY 3

Key in 2000 to clear MEMORY 4

Key in 2000 to clear MEMORY 5

11. The DATE OF INSTALL, ID/SER.NO and Name & ADDRESS must be keyed in.

Key in 2000

Key in 2000

Key in 2000

12. The following screen shows up and data can be entered.

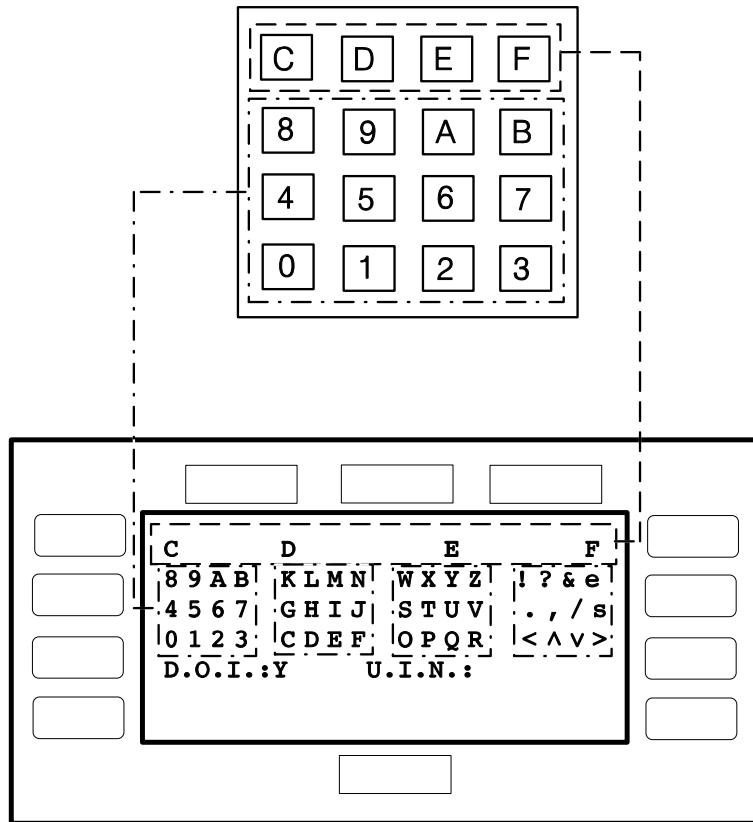


figure 7

! ? & e	e = escape, s = space, < = cursor left,
. , / s	> = cursor right, ^ = cursor up, v = cursor down
< ^ v >	

D.O.I. = DATE OF INSTALLATION

U.I.N. = UNIT IDENTIFICATION NUMBER

13. Exit the SERVICE MODE.

14. If no VIDEO FILM HOLDER is used proceed with the FINAL TEST otherwise continue with step 15.

15. Switch off the ML700 and open the ML700 TOP COVER.
16. Rotate the SWITCHING SHAFT until the CASSETTE OPENER BRACKET is parallel to the CASSETTE TRANSPORT BELT and SWITCH S5(PRU) is actuated.

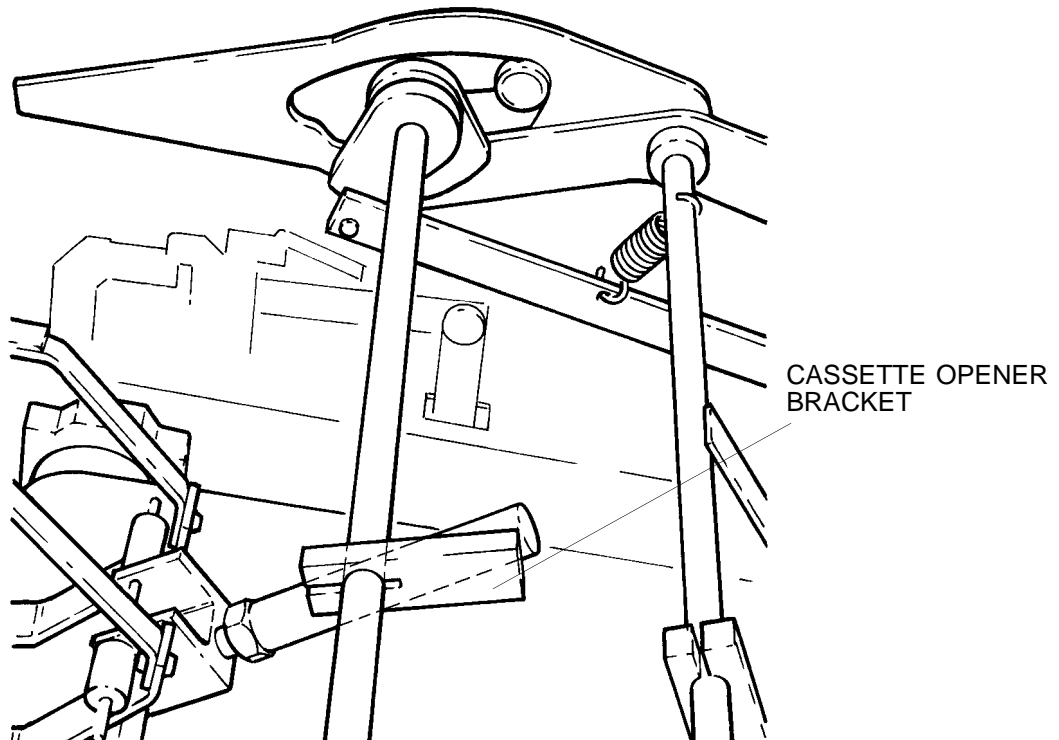


figure 8

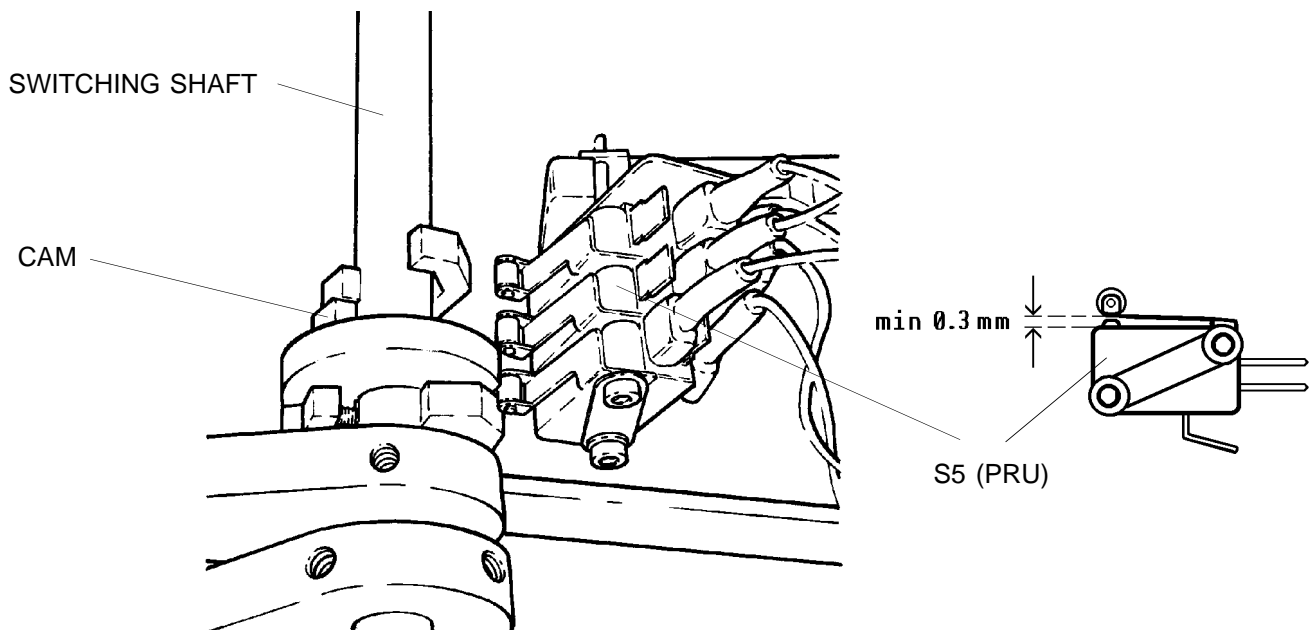


figure 9

- 17.** Manually feed in a VIDEO FILM HOLDER 8x10 inch. Move it fully to the END STOP.
- 18.** Check that SWITCH S2/CW0 is deactuated. (Listen to the "CLICK"). If it is not deactuated, carefully bend up the FRONT TIP of the SENSOR WIRE until SWITCH S2/CW0 is safely deactuated.

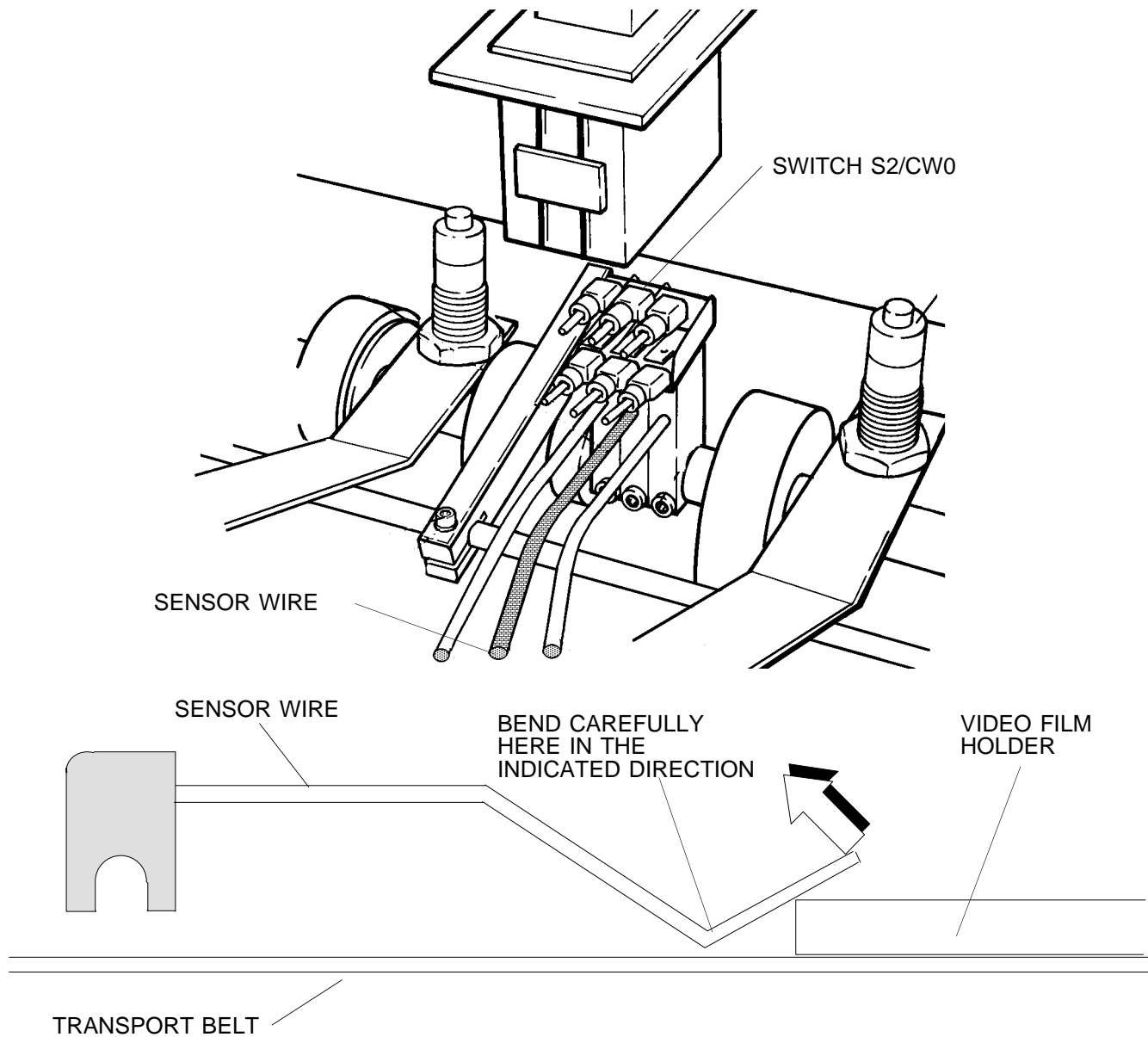


figure 10

- 19.** Take out the VIDEO FILM HOLDER and switch on the ML700. Proceed with the FINAL TEST.

FINAL TEST

1. Check that time and date are correct.
2. Run several cycles with various cassette sizes and check for correct operation.

NOTE

IF VIDEO FILM HOLDERS ARE USED, RUN SEVERAL CYCLES TO CHECK THAT THE CORRECT CASSETTE SIZE IS INDICATED AND THAT ALL CASSETTES ARE TRANSPORTED OUT CORRECTLY. THIS IS ESPECIALLY IMPORTANT IF THE SENSOR WIRE WAS BENT AS DESCRIBED ON PAGE 14 STEP 18..

3. Circle No. 24 on the MODIFICATION LABEL.

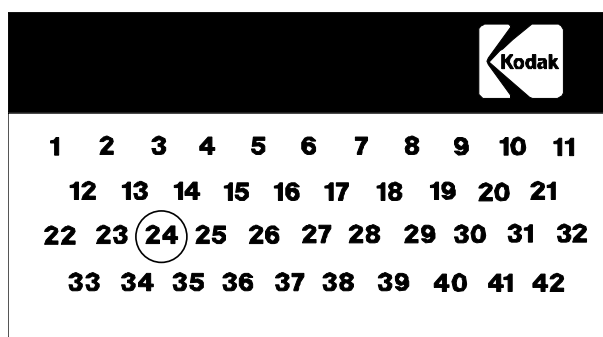


figure 11